BENCHMARK: EXISTING STRUCTURE: Single span concrete concrete deck bridge on timber abutments and wingwalls. 28' fc.-fc. abuts.; 21.0' o.-o. deck; Str. No. 097-3098 Structure closed to traffic during construction. No Salvage Traffic Barrier Terminal, Type 5A See Std. BLR 27-1. SW & NE corners only. Steel Piles HP10x42 (Typ.)

1'-34''

@ West Abut.

Cr. Elev. 415.18

25'-0" Transition

(Typ.)

W.P. #1

BEAR CREEK
BUILT 201_ BY
WHITE COUNTY
SEC. 09-08140-00-BR
INDIAN CREEK ROAD DISTRICT
STR. NO. 097-3275
LOADING HL-93

NAME PLATE See Std. 515001

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation

be allowed for Structure Excavation.

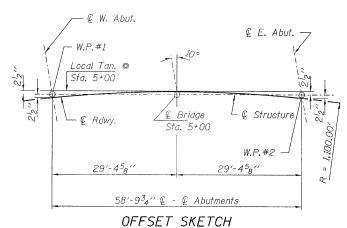
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.

The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

INDEX OF STRUCTURE SHEETS

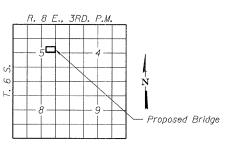
1. General Plan & Elevation
2. 27"x48" PPC Deck Beam
3. 27"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S1
6. West Abutment

6. West Abutment 7. East Abutment 8. HP Pile Details 9-10. Boring



SECTION A-A

Note: See Special Provisions for Stone Dumped Riprap, Class A4.



Stone Dumped Riprap, Class A4

Proposed

Abut. Cap

LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psify = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi f'ci = 5,000 psi fpu = 270,000 psi (½''¢ low lax. strands) fpbt = 201,960 psi (½''¢ low lax. strands) fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD with all applicable interims. 50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Name Plate

Seismic Performance Zone (SPZ) = 3 Design Spectral Acceleration at 1.0 sec. (S_{DI}) = 0.309g Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.733g Soll Site Class = D

See sheet 6 of 10 for details.

Kanada adanadanadanada

- Channel Excavation (Typ.)

WATERWAY INFORMATION

PLAN

- 100 Yr. H.W. Elev. 412.02

- 15 Yr. H.W. Elev. 411.68

└─ Æ Elev. 401.7

MAN STATE OF THE PROPERTY OF T

€ Rdwy.

└ @ Structure

Existing Structure

linear care and and line

Design Scour

Flevation (ft.)

DESIGN SCOUR ELEVATION TABLE

S. Abut. N. Abut.

409.1 409.1

Limits of

ELEVATION

61'-4'4" Bk. - Bk. Abuts.

58′-9¾′′ € - € Piles

<u>∕© Bri</u>dge

Sta. 5+00

Α

Existing Low Grade Elev. © Sta. Drainage Area = 3.01 Sq. Mi. Proposed Low Grade Elev. © Sta.									
Flood	Freq.		Opening	Sq. Ft.	Natural	Head	- <i>Ft</i> .	Headwo	iter El.
1 1000	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	15	1467	236	344	411.68			-	-
Base	100	2580	246	363	412.02	2,28	0.33	414.3	415.3
Max. Calc.	500								

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

Steven Negginson 2/10/2012 ILLINOIS STAUGURAL NO. 081-6064



Expires 11-30-2012

TOTAL BILL OF MATERIAL

TOTAL DIEL OF MATERIAL								
ITEM	UNIT	SUPER	SUB	TOTAL				
Channel Excavation	Cu. Yd.			377				
Stone Dumped Riprap, Class A4	Ton			360				
Removal of Existing Structures	Each			1				
Concrete Structures	Cu. Yd.		26.2	26.2				
Concrete Encasement	Cu. Yd.		2.8	2.8				
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,440		1,440				
Reinforcement Bars	Pound		2,680	2,680				
Steel Railing, Type S1	Foot	125		125				
Furnishing Steel Piles HP10x42	Foot		440	440				
Driving Piles	Foot		440	440				
Name Plates	Each		1	1				

FILE NAME = 110071-sht-bridge.dgn		USER NAME =	DESIGNED -	A.S.L.	REVISED -	
HAMPTON, LENZINI AND RENWICK, INC.			CHECKED -	S.W.M.	REVISED -	ĺ
SPF	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 82703	PLOT SCALE =	DRAWN -	D.A.B.	REVISED -	ĺ
	ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 2/10/2012	CHECKED -	S.W.M.	REVISED -	L

STATE OF ILLINOIS
WHITE COUNTY HIGHWAY DEPARTMENT

Curled End Sections

└─ Stone Dumped Riprap, Class A4

© East Abut. W.P. #2

Cr. Elev. 415.18

See sheet 5 of 10 for details. NW & SE corners only.

GENERAL PLAN & ELEVATION		SECTION	COUNTY	TOTAL	SHEE NO.
STRUCTURE NO. 097-3275	251	09-08140-00-BR	WHITE	14	5
	INDIAN	CREEK ROAD DISTRICT	CONTRACT	NO. 9	9474
SHEET NO. 1 OF 10 SHEETS		ILLINOIS FED. A	D PROJECT		